



**National Center for
Autonomous Technologies**



THINK AUTONOMOUS

JANUARY 2021

H A P P Y
N E W
Y E A R

The NCAT team wishes you a Happy New Year!

The year 2020, although different, was another great year of collaborations, partnerships, and efforts towards diversifying the incoming pipeline of AT technicians. We look forward to clearing the path, diving deeper, and spreading our wings in 2021!

WHAT'S YOUR STORY?



Get involved with us and the autonomous technology community by [sharing your story!](#) By sharing experiences, accomplishments and challenges, you are helping to inspire students, educators and industry professionals.

GET INVOLVED



New York "Southerner" Developing Career Pathways For Students

Buffy Quinn is developing career pathways for high-school students by integrating UAV data analysis into program.

[READ HER STORY](#)

UPCOMING EVENTS



From Ideas to Reality: Developing, Starting, and Maintaining a Drone Program

February 4, 2021 | 2:00 PM CT

Starting a drone program or even offering a drone course at your institution can be challenging. Variables to be considered include equipment costs (both hardware and software), administrative support, liability concerns, hardware registration, what curriculum to offer (and how to teach it safely), potential low enrollment, and what qualifications faculty need to teach the course(s).

In this webinar we will explore these topics, provide methods and ideas to overcome some of these obstacles, and offer resources (including curricular) that

will be helpful for new start-ups as well as existing courses/programs.

[REGISTER](#)



Eleventh Annual Autonomous Snowplow Competition

February 8-12, 2021

The purpose of this competition is to challenge university and college students, as well as the general public, to design, build, and operate a fully autonomous snowplow to remove snow from a designated path. The Autonomous Snowplow Competition objective is to encourage students and individuals to utilize the state of the art in navigation and control technologies to rapidly, accurately, and safely clear a path of snow.

This year's event will be held virtually for the safety of all participants.

[MORE INFO](#)

Do You Have An Event To Share?



We will promote your professional development workshops, webinars, educator workshops, or any other events related to autonomous technology and advanced technological education with our large network of educators, students, and industry leaders via our website and social media!

[SUBMIT EVENT](#)

NCAT ACTIVITIES



NCAT Partners with Women And Drones Fueling Diverse Talent in STEM Careers

"We are thrilled about the opportunity to become an educational partner of Women And Drones and broaden our range of leaders in the drone industry."

The resources each organization brings to the table will be instrumental in advancing STEM education to underserved populations. We are dedicated to removing barriers and providing access for all, in order to diversify the pipeline of the nation's autonomous technologies workforce, across air, land and sea because diversity drives innovation" - Jonathan Beck, NCAT Executive Director

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NEW RESOURCES



NCAT Community Forum

NCAT has developed an online forum to provide a single place for professionals, educators, and students in the AT industry to ask questions, share best practices, and collaborate. Topics covered in the forum will range from general discussion around unmanned aircraft systems, connected and automated vehicles and unmanned maritime systems to curriculum resources, starting a program and student competitions, include the MATE ROV Competition, RAD Drone Competition and VEX Robotics. This platform serves as a virtual

community of educators and practitioners from industry, government, and professional or trade associations.

To join the conversation or leave questions for NCAT staff and members of the AT community you must be an active member on the website. To register or login, visit ncatech.org/user-login.

NCAT FORUM



FAA UAS-Collegiate Training Initiative

The UAS-CTI is a new program designed for universities, colleges, and technical schools by the FAA to recognize institutions that prepare students for careers in UAS or drones. The results of this collaborative working relationship will include a continuous dialogue with stakeholders to connect with colleges and universities with general industry, local governments, law enforcement, and regional economic development entities to address labor force needs.

NCAT Co-PI, Zackary Nicklin serves as Co-chair of the UAS-CTI initiative alongside Diana Robinson from the Federal Aviation Administration (FAA). A key cornerstone for NCAT is to provide the educational resources for

curriculum interactive content, application and exchange of ideas for autonomous technologies across the country. By NCAT serving up the UAS-CTI resources and community forum, we are encouraging 2- and 4-year colleges to collaborate on creating and updating AT programs and share education and training resources.

UAS-CTI RESOURCES

INDUSTRY NEWS



SkySkopes
Professional Pilots • Innovative Solutions

**UAS Cold Weather Operations:
What You Need To Know About Flying In The Cold**

Being the National Center for Autonomous Technologies home base is in northern Minnesota, it's no surprise that we get asked questions about best practices for drone cold weather operations. We teamed up with our industry partner - SkySkopes, whose headquarters are in Minot, North Dakota to get tips from their team of highly qualified operators.

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ENDURANCE

Environmentally Non-Disturbing Under-ice Robotic ANtarctic Explorer: Hovering Autonomous Underwater Vehicle

During the past six years, Stone Aerospace has developed two generations of autonomous underwater vehicles and used them in a variety of hazardous environments from the original exploration and mapping of deep

hydrothermal springs to sub-glacial lake exploration and science missions in Antarctica. ENDURANCE, their second generation AUV, represents a major re-design of the DepthX vehicle to accommodate a sub-ice mission to West Lake Bonney in Taylor Valley, Antarctica. The scientific objectives of the mission are to...

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Federal Aviation Administration (FAA) Issues Much-Anticipated Drone Rules to Advance Safety and Innovation in the United States

The Federal Aviation Administration has announced new rules for drone operators that will ease restrictions on the overall use of drones and address security concerns making drones easier to track. The updated regulations announced by the FAA "get us closer to the day when we will more routinely see drone operations such as delivery of packages", FAA Administrator

Stephen Dickson stated. These rules come at a time when drones represent the fastest-growing segment in the entire transportation sector, with currently over 1.7 million drone registrations...

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